



At the center of treatment innovation

with the revolutionary PILOT Patient Transfer System
and Nexaris Angio-MR-CT^a

This document is intended to provide information to an international audience outside of the US.

GETINGE 



Multi-modality intraoperative imaging

Holistic health management is crucial for institutions striving to keep pace in today's healthcare environment.

Beyond early detection of diseases, innovative healthcare providers are also striving toward new procedures that make treatment more effective by combining the most advanced minimally invasive techniques and the latest medical imaging methods.

In order to eliminate patient repositioning when switching between surgical table and imaging modality, Getinge joined forces with Siemens Healthineers to develop the PILOT System. This new technology ensures that the patient remains stable in the intended treatment position while all imaging tasks are centered around him.

Using the Maquet Transmobil TT-M Patient Transporter, the patient can additionally be transferred in a stable position between the OR and ICU and anywhere in between.

In combination with Siemens Healthineers' Nexaris Angio-MR-CT^a, we are removing physical barriers to using multi-modality imaging in the OR for preprocedural planning, intraoperative guidance, and immediate quality control.



Nexaris Angio-MR-CT^a at a glance

Nexaris Angio-MR-CT^a seamlessly combines multiple imaging modalities in one environment and requires no patient repositioning, so you can focus entirely on exploring more possibilities during treatment.

Innovating procedures is key

Unlimited imaging without patient repositioning

Image-guided minimally invasive therapy can replace many open procedures, which can help minimize complications and boost quality control. Seamless combination of all imaging modalities in one environment is necessary so that you can use imaging for treatment to the fullest extent.

Up to 10% of patients undergoing open procedures such as bowel resection and bariatric surgery suffer postoperative complications¹ – and reoperations may prove difficult. Procedures that employ intraoperative imaging reduce risk for patients and lower complication rates,^{2,3} thereby improving patient outcomes and cost efficiency at the same time. Despite the benefits, imaging setups in the OR today are still rare and, even if

available, they may be too complicated to use on a routine basis. Moving the patient between imaging modalities and surgical tables can also introduce unacceptable risk. A study shows that more than half of neurosurgery cases are delayed, possibly because MRI scans are not sufficiently prioritized for surgical navigation planning or there are delays associated with patient transfer.⁴

- Experience seamless access to intraoperative imaging without the need for repositioning patients
- More possibilities during treatment with synergized angio, MR, and CT image information
- Team up with an experienced partner to customize your Nexaris Angio-MR-CT^a in combination with PILOT

1 Maquet Magnus Operating Table System

The patient remains in the final treatment position on the surgical table for imaging with ARTIS pheno^a or a sliding gantry CT and can be transferred without repositioning to the MR with help of Maquet Transmobil TT-M or Nexaris Dockable Table.



Interchangeable and configurable table tops allow flexible adaption to required patient positions and different imaging tasks. In addition, using two or more table tops each room allows paralleled workflows with patient preparation outside the OR and reduced downtime in between procedures.



2 Maquet Transmobil TT-M

Holistic workflow beyond OR for repositioning-free patient transport

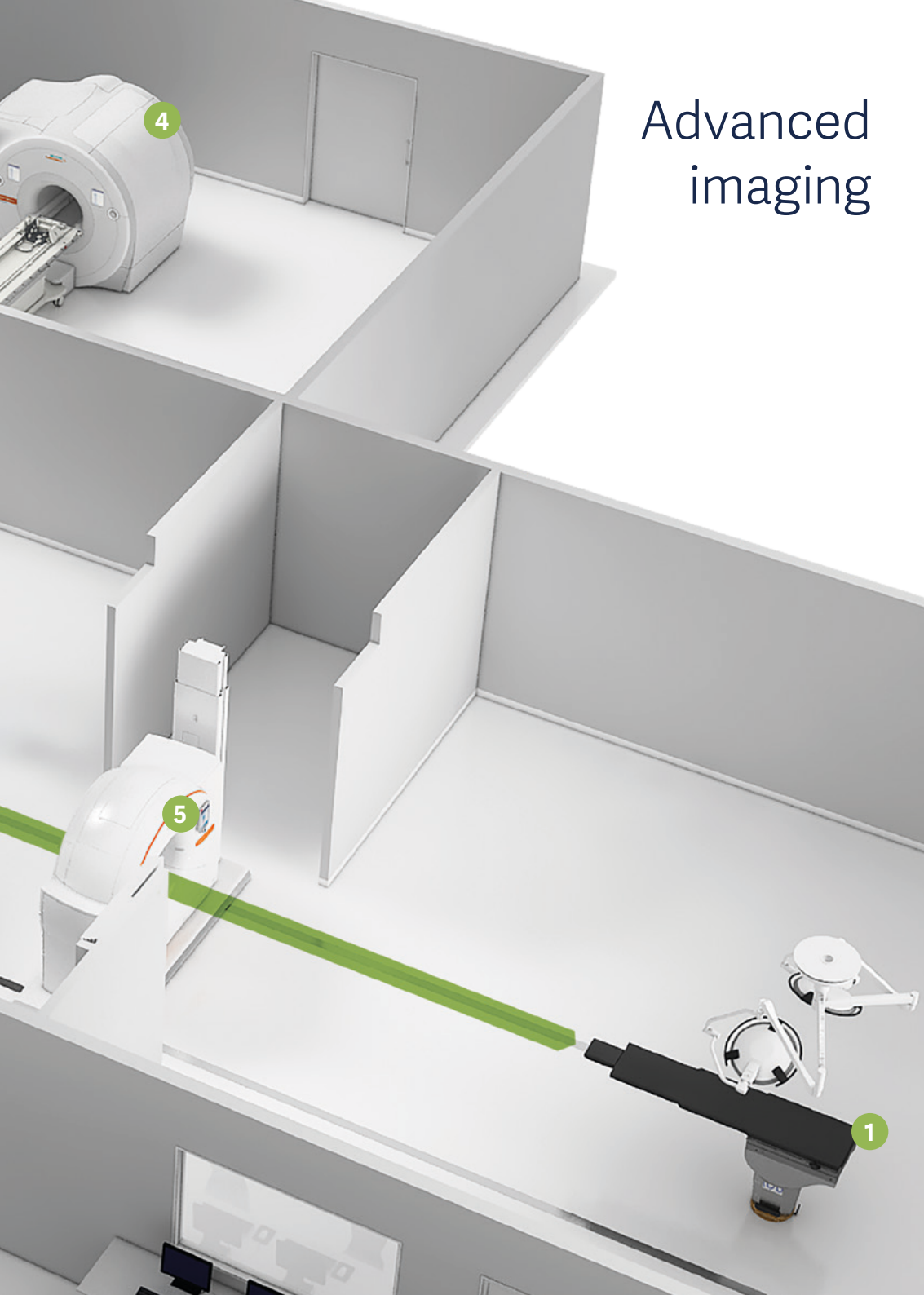
- From helicopter landing pad or ER to ICU or OR
- ICU to OR and back for post-operative care
- From other OR's to MR modality
- From Hybrid OR to another OR, getting the multi-modality space available for other patients



Seamless workflows



Advanced imaging



3 Angiography

Whole-body X-ray imaging for image-guided and interventional procedures, using tools such as fluoroscopy, digital subtraction angiography (DSA), 3D imaging, needle guidance and image fusion.



4 MRI with Nexaris Dockable Table

Whole-body MRI for enhanced soft tissue information without ionizing radiation, such as perfusion imaging, diffusion-weighted imaging, imaging to support ablation verification and vascular assessment.



Seamless patient transfer without repositioning from surgical table to MR with integrated coils that support head and body imaging.

5 Sliding gantry CT

Fast and comprehensive image information in time-critical situations

- High and low contrast imaging
- Skeletal imaging
- CT angiography
- CT needle guidance
- Perfusion imaging



Seamless transfer

without repositioning

PILOT is a patient-centered transfer system that eliminates the barriers to using intraoperative whole-body angio, CT, and MR imaging at any point during the procedure. The patient can be transferred seamlessly throughout the entire hospital and between imaging modalities without repositioning.

The core of the transfer concept is the new transfer board, jointly designed by Getinge and Siemens Healthineers. You can slide the transfer board from the Maquet Magnus OR Table to the Nexaris Dockable Table^{a,b} and back without patient repositioning. Seamless transfer between the angio system and MRI scanner is now possible during procedures in an OR setting.

Both table top and transfer board are made from X-ray translucent material to permit intraoperative CT as well. Furthermore, the patient transporter Maquet Transmobil TT-M allows for patient transfer from anywhere in the hospital to the OR or MRI and back.



Patient slides smoothly between tables on the transfer board

Headplate

Suitable for X-ray imaging;
can be exchanged with
compatible head clamps

Pad

Visco elastic cushion for
optimal patient comfort

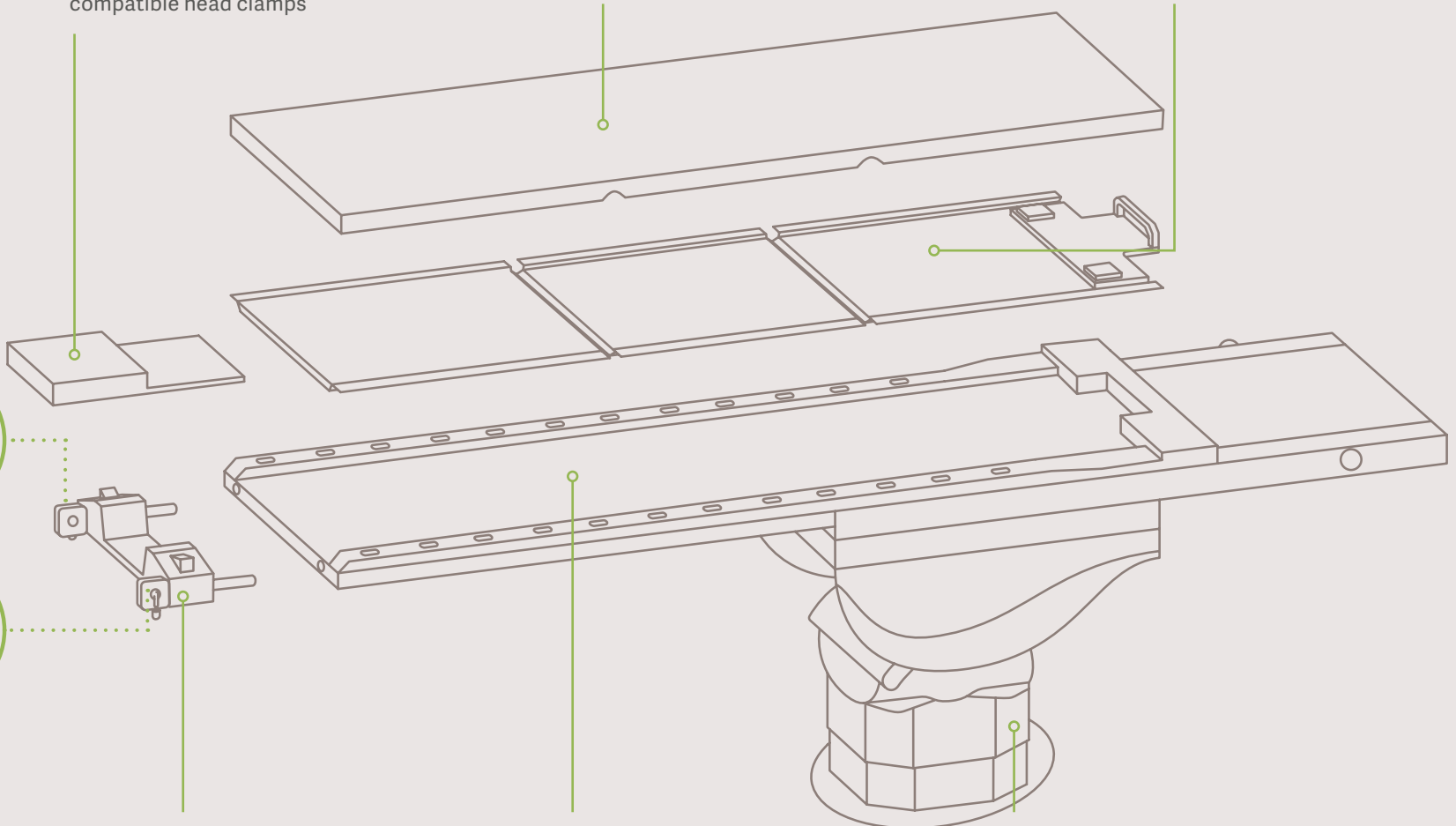
Transfer board

Made of Kevlar for MRI and
X-ray compatibility

Nexaris
Dockable Table^{a,b}



Maquet
Transmobil TT-M



Docking adapter

Secure docking between
Maquet Magnus, Nexaris Dockable
Table^{a,b}, and Maquet Transmobil TT-M

Table top

Radiolucent carbon fiber construction

Table column

320° rotation
enables flexible positioning



Staying ahead in today's healthcare market

For healthcare providers, the industry-wide shift from fee-for-service models to value-based reimbursements is creating increased economic pressure. The needs of the growing aging population add to this – and the demand for safer and more effective treatment

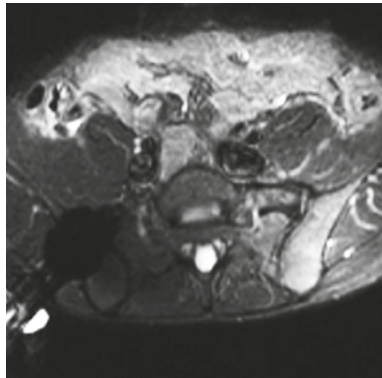
creates further challenges due to the associated costs. Advancements in medical imaging enable hospitals to stay ahead by developing and performing innovative minimally invasive procedures.

More possibilities during treatment

without repositioning



Complete resection



Full ablation control



Fast trauma care

Nexaris^a and PILOT pave the way for exploring more possibilities during treatments by combining multiple imaging modalities in a single procedure. Seamless access to cutting-edge imaging offers high precision and quality control, as well as the potential to replace high-risk procedures that are more invasive with minimally invasive alternatives.

World's population older than 60 years



Aging population pressure

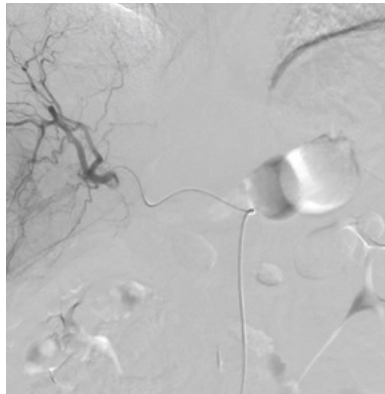
By 2020,⁵ the number of people older than 60 years is expected to surpass the number of children younger than five years. The aging population confronts the health systems with challenges, particularly in regard to cancer treatment that requires surgical intervention.



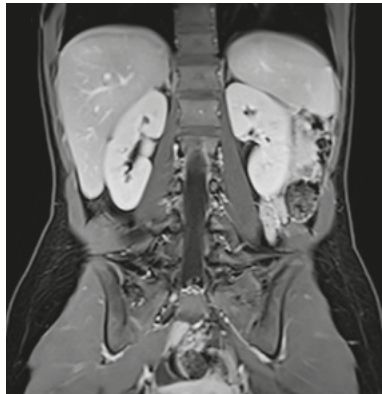
Image guidance enables cost-effective procedures⁶

With conventional treatment, costs are difficult to contain. Medical imaging helps optimize procedures for individual patients, which could potentially lead to shorter hospital stays and fewer reoperations. Optimal integration of diagnostics along the treatment path represents an opportunity to improve patient care and minimize costs.

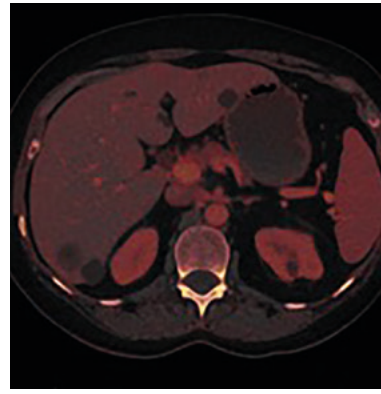
Experience the power of multi-modality imaging



Angiography: simplify complex procedures

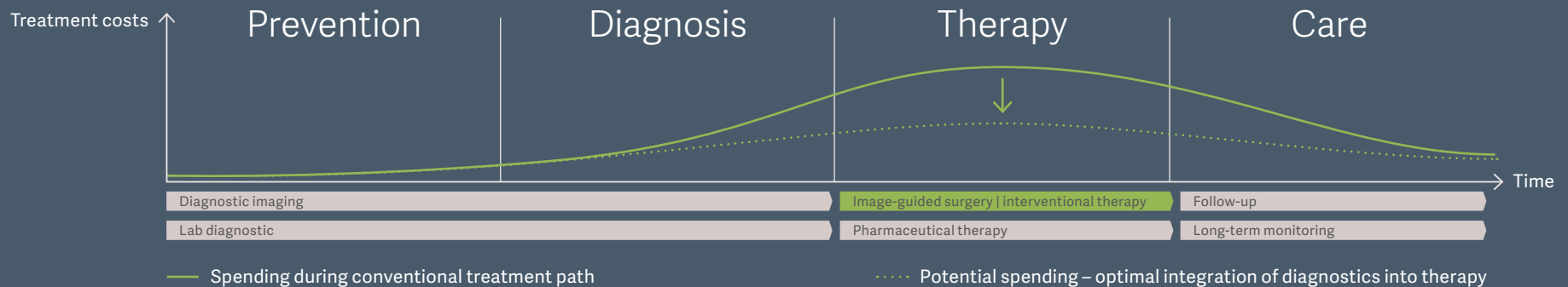


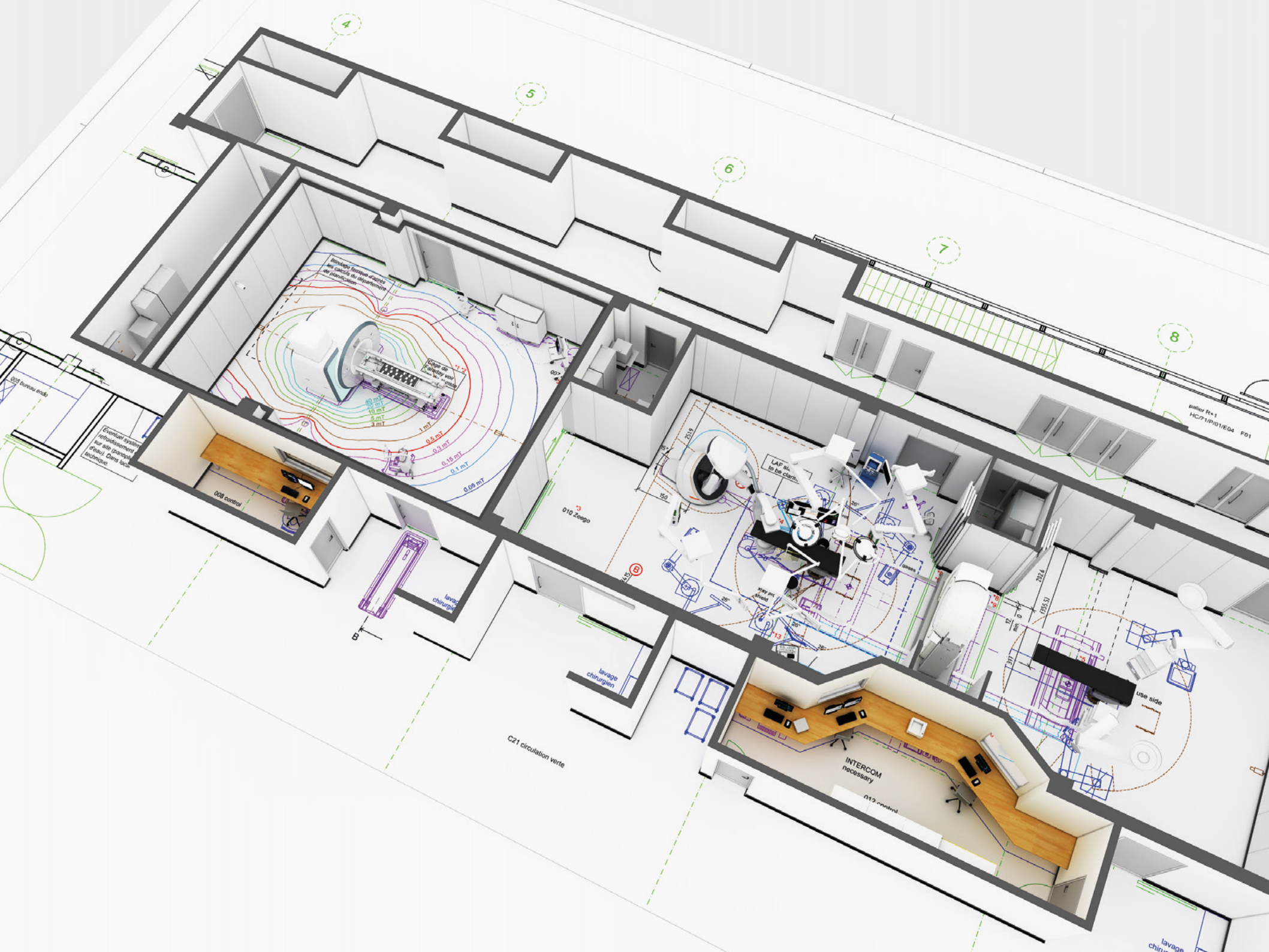
MRI: visualize details without a dose of radiation



CT imaging: get the full picture fast

Image guidance helps with intraoperative monitoring and outcome verification. It allows physicians to determine whether a procedure needs to be adapted or continued. When you combine multiple imaging modalities during therapy, you get the advantages of each right away.





Customize your multi-modality suite and team up with an experienced partner

Through seamless access to multi-modality imaging and hospital-wide patient transfer, the combination of Nexaris Angio-MR-CT^a and PILOT creates an entirely new treatment experience. Let's combine forces to design the OR that will help you innovate therapy.



Plan your multi-modality OR

Seamless integration is about more than delivering a turnkey solution. It is about optimizing workflows and workspaces, synchronizing components, and implementing international hygiene standards throughout the room.

When planning a Hybrid OR concept, many aspects such as laminar air flow, lighting, and the dimensions of the equipment and operating table need to be considered. It takes experience and precision to develop a functional room that allows smooth and efficient working. Customized to your needs, our room and layout concept will save you time and money.

The Getinge project planning teams have the expertise and the tools to develop a coherent and harmonious workspace. Using state-of-the-art 3D software, we will design an OR that meets and exceeds your expectations. Using our knowledge gained from installing more than 1,500 Hybrid ORs, let's work together to design the optimal workspace for your surgical staff.

Plan your multi-room setup

Getinge and Siemens Healthineers will accompany you along the journey of customizing your multi-modality OR according to your specific needs by combining our shared technical and clinical experience with multi-modality setups. We believe in partnering with our customers as we design and implement our solutions, so we are excited to hear your ideas and help you translate them into practice.

When setting up your Nexaris Angio-MR-CT^a, it is crucial to keep the whole project in mind and at the same time address the particular needs of different stakeholders from both a clinical and a technical point of view. Our goal is to deliver a tailor-made solution that meets your needs and exceeds your expectations.





Initial consultation

Installing a highly flexible OR setup that combines imaging modalities for optimal utilization necessitates extensive OR planning experience and in-depth knowledge of clinical applications. We bring together experts in architecture, clinical applications, technical installations, and rules and regulations to align requirements at the right time and place. Depending on your needs, our consultants are ready to accompany your project from concept through implementation.

OR planning

During OR planning, everybody needs to be on the same page. This is why we make it a priority to discuss layout options with our customers and adjust them until they are perfect. We choose the appropriate clinical, technical, or financial approach to communicating these options according to the needs of our partners in every phase. We also provide 3D renderings of the planned setup that show only those aspects relevant for medical staff to streamline planning for clinical applications.

Smooth operations

Surgery, interventional radiology, and diagnostic radiology all have different requirements. The technical department requires easy access to the technical room, and the hygienist is focused on easy and thorough cleaning. At the same time, hospital management is interested in how to make the setup both cost-effective and efficient. We will help you manage all of these priorities to deliver optimal care and remain at the forefront of therapy.

Configure your multi-modality suite

enabled by our PILOT Patient Transfer System



OR table system

The Maquet Magnus adds extraordinary flexibility to your OR. The table system is freely configurable based on your diagnostic and therapeutic needs. In combination with the special table top and transfer board, you can access all imaging modalities of Nexaris Angio-MR-CT^a with ease. Even in time-critical situations, Maquet Magnus gives you the freedom you need to make the best possible decisions for your patients.



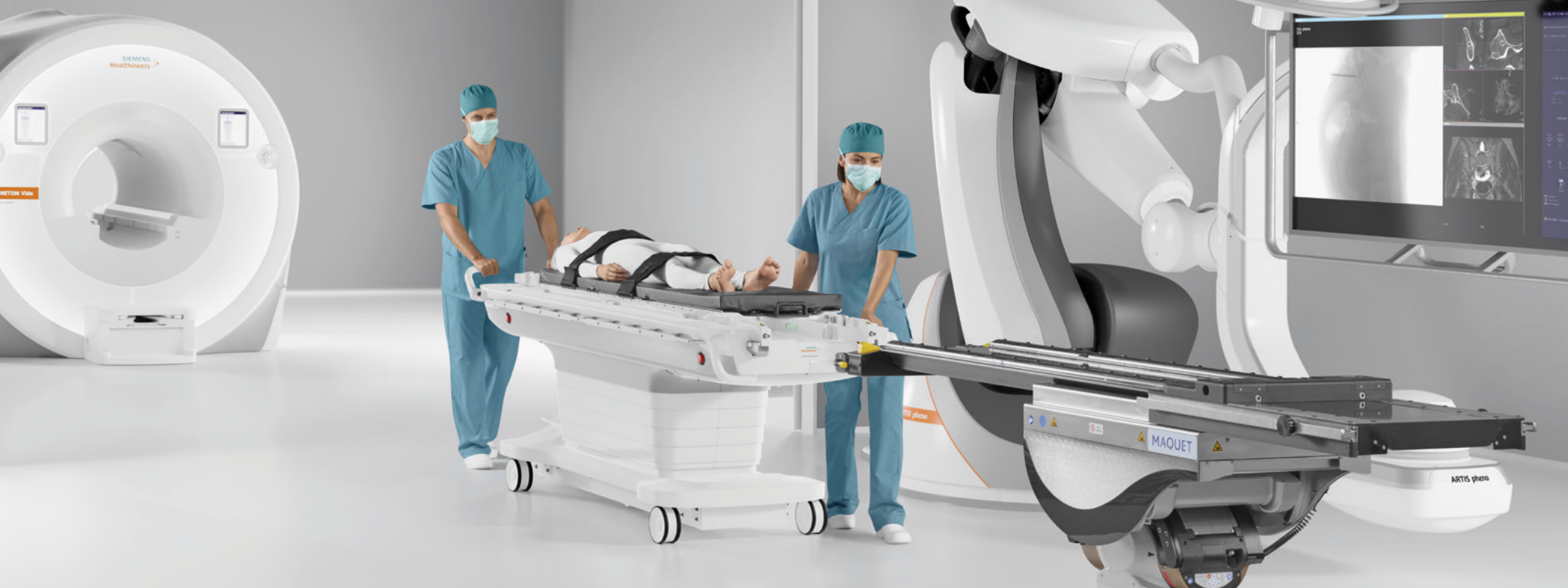
Dockable MR table

The Nexaris Dockable Table allows seamless patient transfer from the surgical table to the MRI modality. Flex and body coils facilitate whole-body MRI during surgery and diagnostics.



Patient transporter

No matter whether your patient is located in the ICU or has just arrived via helicopter, the height-adjustable Maquet Transmobil TT-M enables you to bring him to the OR and back. Because the patient transporter supports the PILOT Transfer Board, you can simply slide the patient onto the Maquet Magnus or Nexaris Dockable Table^{a,b} once you get to the OR – no repositioning or lifting is necessary.



Robotic angio system

ARTIS pheno^a is a cutting-edge robotic imaging system with procedural intelligence. The combination of imaging and workflow software helps optimize clinical operations in the Hybrid OR. ARTIS pheno supports preprocedural planning, intraoperative guidance, and immediate assessment.

MRI

Nexaris Angio-MR-CT^a is compatible with the MAGNETOM Vida (3T)^a and MAGNETOM Sola (1.5T)^a MRI scanners. Offering exceptional image quality, increased flexibility, and superior speed, both modalities support MRI for the whole body. The exam software DotGO^a makes protocol management intuitive, so you can consistently achieve high-quality scan results.

CT

With SOMATOM CT Sliding Gantry Systems^a, you get advanced CT imaging on rails. The scanners SOMATOM Edge Plus^a and SOMATOM Confidence^a both combine high scan speed for time-critical cases with advanced 3D imaging capabilities for pre-, intra-, and post-operative functional assessments.

Additional products and services

Getinge IN2 and Digital Healthcare Solutions

Structure and flow are the fundamental elements of a successful Hybrid OR. With the Getinge IN2 Modular Room System, your Getinge expert can plan and design an intuitive workplace that streamlines workflows.

Combined with IT solutions by Getinge that work together to ensure a safer, integrated, and better utilized facility, we are enabling healthcare professionals to focus on delivering the best possible care for patients.



Getinge solutions for Hybrid ORs

From MR-compatible ventilators to tables and everything in between, Getinge has created a product offering for Hybrid suites that is second to none. The elements complement each other for seamless interaction and an ergonomic user experience.

We go beyond individual products and deliver complete multidisciplinary solutions that suit all professional disciplines within the Hybrid OR environment.



Ultrasound – Acuson Freestyle^a

The ACUSON Freestyle Series is the world's first wireless ultrasound solution, redefining ultrasound access in the interventional suite and at the point of care. The series offers scalable configurations to promote automated workflow, clear visualization and faster access to the ultrasound procedure using cable-free and wireless technologies, and cross-modality synchronization.



Advanced system support

For better data exchange, the log files of the Maquet Magnus System can be read by the Siemens technical support team. Siemens remote service (SRS)^a is a secure data link that connects your medical systems to the service experts in our customer care center. Via SRS^a, the performance and condition of your equipment can be monitored in real time.

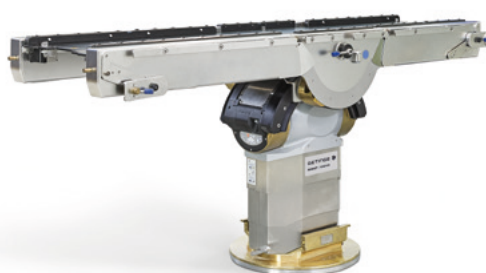


Technical specifications

PILOT ready



PILOT ready



PILOT ready



Maquet Magnus System with 1180.12 multimodality transfer table top

Length incl. head rest	2,700 mm
Width	620 mm
Height adjustment	837–1,467 mm
Lateral tilt	15°
Longitudinal shift	600 mm
Trendelenburg/ Reverse Trendelenburg	± 15°

Maquet Magnus System with 1180.13 transfer table top

Length	2,026 mm
Width	595 mm
Height adjustment	625–1,330 mm
Lateral tilt	± 25°
Longitudinal shift	220 mm
Trendelenburg/ Reverse Trendelenburg	± 30°

Maquet Transmobil TT-M

Length	2,120 mm
Width	821 mm
Height adjustment	690–1,020 mm
Lateral tilt	n.a.
Longitudinal shift	n.a.
Trendelenburg/ Reverse Trendelenburg	± 12°

Nexaris Dockable Table ^{a,b}		
Length	Handles up: 2,740 mm Handles down: 2,598 mm	
Width	824 mm	
Weight of patient table	Nexaris Dockable Table configuration = 316 kg	
Vertical table movement	Range Speed	560–1,020 mm + 13 mm 32 mm/s ± 1 mm/s
Horizontal table movement	Max. range	2,675 mm ± 10 mm (MAGNETOM Sola) 2,815 mm ± 10 mm (MAGNETOM Vida)
	Max. speed	200 mm/s ± 2 mm/s

SOMATOM Edge Plus Sliding Gantry ^a	
Travel length	12 m
Number of detector rows	64
Max. number of slices/rotation	128 (acquired slices) / 384 (reconstructed slices)
Rotation times	0.33 s, 0.5 s, 1.0 s (opt. 0.28 s)
Generator power	80 kW (opt. 100 kW)
Aperture	78 cm
Tube voltage	70, 80, 100, 120, 140 kV
Clinical options	TwinBeam Dual Energy Adaptive 4D Spiral Adaptive 3D Interventional Suite iMAR

ARTIS pheno ^a	
Installation	Floor-mounted
C-arm	6 axes, SID lift, detector and collimator rotation
Detector	30 x 40 cm with zen technology, 1,000-micrometer scintillator thickness, 92 fps readout for 3D
X-ray tube	90 kW at 125 kV, flat emitter technology, CLEARpulse

SOMATOM Confidence 64 Sliding Gantry ^a	
Travel length	12 m
Number of detector rows	32
Max. number of slices/rotation	64 (acquired slices) / 192 (reconstructed slices)
Rotation times	0.33 s (opt. 0.3 s)
Generator power	80 kW (opt. 100 kW)
Aperture	80 cm
Tube voltage	70, 80, 100, 120, 140 kV
Clinical options	Adaptive 3D Interventional Suite iMAR

MAGNETOM Sola ^a / MAGNETOM Vida ^a	
Magnet	1.5 T (Sola) / 3 T (Vida)
Field of view	50 x 50 x 50 cm ³ (Sola) 55 x 55 x 50 cm (Vida)
Bore size	70 cm
Coils	Flex 4 Large + Flex Coil Interface Flex 4 Small + Flex Coil Interface Ultraflex 18 Large with Nexaris Head Frame Body 18/Body 18 Long Nexaris Spine 36
Technology	BioMatrix
syngo version	syngo MR XA31 ^a
Patient table	BioMatrix Dockable Table Nexaris Dockable Table ^{a,b}

References

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2. Michael Schulder and Peter W. Carmel, "Intraoperative Magnetic Resonance Imaging: Impact on Brain Tumor Surgery," *Cancer Control* 10, no. 2 (2003): 115–24, <https://doi.org/10.1177/107327480301000203>.
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4. Janice Wong et al., "Delays In the Operating Room: Signs of an Imperfect System," *Canadian Journal of Surgery* 53, no. 3 (2010):189–95.
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6. "Hybrid Operating Room Market," *MarketsandMarkets*.
 - a The information shown herein refers to products of 3rd party manufacturers and thus are in their regulatory responsibility. Please contact the 3rd party manufacturer for further information.
 - b The products/features (mentioned here) are not commercially available in all countries. Due to regulatory reasons, their future availability cannot be guaranteed.

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With a firm belief that every person and community should have access to the best possible care, Getinge provides hospitals and life science institutions with products and solutions aiming to improve clinical results and optimize workflows. The offering includes products and solutions for intensive care, cardiovascular procedures, operating rooms, sterile reprocessing and life science. Getinge employs over 10,000 people worldwide and the products are sold in more than 135 countries.

This document is intended to provide information to an audience outside of the US.

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